

Zennoske IWATSUKI*: **Bryological miscellanies XIV-XV****

岩月善之助*: 蘚苔類雜記 XIV-XV**

XIV. A new species and some new additions to the Formosan moss flora.

1. **Glyphomitrium formosanum** Iwatsuki, sp. nov.¹⁾

Plants yellowish-green to yellow above, brownish below, forming dense tufts. Stems ascending, ca. 2 cm or more in length, sparingly branched, densely foliated. Leaves crispate when dry, erect-spreading when moist, linear-lanceolate, acuminate at apex, reaching 3-4 mm in length, 0.4 mm wide at base, margins entire, revolute from near base to middle, the costa rather strong, ceasing in apex, ca. 40 μ wide at base. Leaf-cells rounded-quadrate, thick-walled, smooth, the cell-lumen about 10-12 μ in diam. at middle of the leaf, toward the base rectangular and thin-walled. Inflorescences autoicous. Male buds in leaf-axils, perigonal leaves few, the innermost ones ovate, concave, about 0.8 mm long, paraphyses none. Setae terminal. Perichaetial leaves differentiated from the stem leaves, convolute and clasping the base of the seta, the innermost the largest, about 2-3 mm long, from an oblong sheathing base suddenly strongly attenuate, the costa thin, ceasing in apex. Setae pale yellow, ca. 3 mm long, ca. 60 μ wide, smooth. Capsules pale yellow, exserted from the perichaetium, erect and symmetrical, oblong, ca. 1 mm long, 0.3 mm wide. Exothecial cells around the mouth in 2-3 rows, small, ovate, about 10 μ long, below suddenly changing to rounded-rectangular, thick-walled cells 40-60 μ long and verrucose. Peristome single, teeth 16, lanceolate, thin, recurving when dry, pale yellow to hyaline, 160 μ in length, articulations prominent, smooth. Lid rostrate. Calyptra mitriform, reaching to the base of capsule, sulcate. Spores sphaerical, 28-40 μ in diam., minutely papillose.

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1) Folia sicca crispata, madida erecto-patentia, lineari-lanceolata, 3-4 mm longa, basi 0.4 mm lata, apice acuminata, nervis crassiusculi, apice evanido, cellulis laminalibus rotundato-quadratis, laevibus, parietibus crassiusculis. Inflorescentia autoica. Bractae perichaetii intimae longissimae, 2-3 mm longae, e basi vaginante sensim anguste attenuatae, nervis tenuibus, apice evanido. Setae ca. 3 mm altae, lutescentes. Thecae erectae, oblongae, ca. 1 mm longae, laeves. Peristomii dentes lanceolati, ca. 0.16 mm longi, articulati, laeves. Sporae ca. 28-40 μ magnae, minutissime papillosae.

Hab. On trunk of fir trees in fir forests with a luxuriant undergrowth of alpine bamboo, ca. 3100 m. alt., between Mt. Ta-Hsueh and Mt. Tou-Ying, Taichung, Formosa. May 10, 1961, coll. C. K. Wang, no. 1322—type in herb. NICH, no. 228069.

This species is easily distinguished from *G. humillimum* (Mitt.) Card. and *G. calycinum* (Mitt.) Card. which have been recorded from Japan and Formosa, by larger size of plants and longer and narrower leaves. *G. acuminatum* Broth., another ally, has longer perichaetial leaves than those of present species. *G. hunanense* Broth. can be separated from the present species by the shorter leaves and the capsules immersed in the perichaetium. The European *G. daviesii* (With.) Brid. is similar to the present species in some respects; however, *G. formosanum* is larger than *G. daviesii*, and has longer capsules and the exothecial cells which are not horizontally rectangular.

2. ***Stereophyllum ligulatum*** (C. Muell.) Jaeg., Ad. II, p. 541 (1877-78).—*Hypnum ligulatum* C. Muell., Bot. Zeit. p. 438 (1856).—*Stereophyllum pygmaeum* Par. et Broth., Rev. Bryol. **34**: 48 (1907), syn. nov.

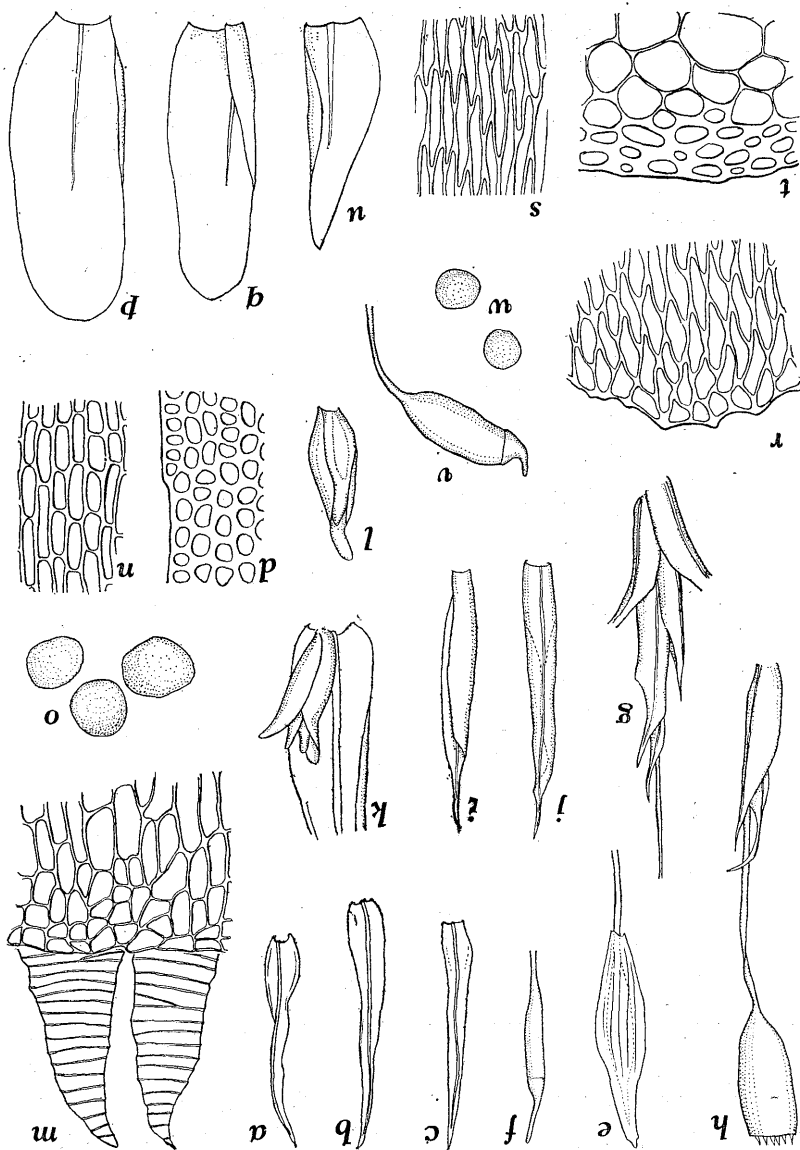
Hab. On large branches of a broad-leaved tree and on liana in hardwood forests, upstream area of Ali-pu-tang-chi, ca. 1200 m. alt., Nantow, Formosa. Aug. 16, 1961, coll. C.K. Wang, nos. 1452 and 1455 in herb. NICH.

Through the courtesies of Dr. H. Persson of Rijksmuseum, Stockholm, I examined a specimen of *Stereophyllum ligulatum* from India (coll. Sedwick, 24, det. Dixon) and the isotype specimen of *S. pygmaeum* Par. et Broth. from Annam (coll. Eberhardt), and found them to be conspecific. The Formosan specimens have somewhat larger leaves; however, the size and shape of the leaf-cells and of the spores are same as those of Indian and Annamese specimens. The genus *Stereophyllum* is new to Formosa.

3. ***Actinodontium raphidostegum*** (C. Muell.) v. d. B. et Lac., Bryol. Jav. **2**: 37, pl. 160 (1862).—*Hookeria raphidostega* C. Muell., Syn. **2**: 677 (1851).—*Lepidopilum raphidostegum* Broth. in Engl., nat. Pflanzenfam. p. 959 (1907).

Hab. On rocks aside the road to University Pool, 1200 m. alt., Nantow,

Fig. 1. *Glyphomitrium formosanum* Iwatsuki (a-o) and *Stereophyllum ligulatum* (C.M.) Jaeg. (p-w). a-c. Leaves, $\times 12$. d. Median leaf cells, $\times 260$. e. Calyptra, $\times 12$. f. Young capsule, $\times 12$. g. Perichaetium, $\times 12$. h. Capsule, $\times 12$. i-j. Perichaetial leaves, $\times 12$. k. Perigonium, $\times 51$. l. Perigonial leaves, $\times 51$. m. Peristome teeth, $\times 260$. n. Basal leaf cells, $\times 260$. o. Spores, $\times 260$. p-q. Leaves, $\times 22$. r. Apical leaf cells, $\times 260$. s. Median leaf-cells, $\times 260$. t. Cross-section of stem, $\times 260$. u. Perichaetial leaf, $\times 22$. v. Capsule, $\times 12$. w. Spores, $\times 260$. (a-o were drawn from the type of *G. formosanum*; p-w from specim. from Formosa, Wang, 1452).



Chi-tou, Formosa, April 2, 1959, coll. C.K. Wang, no. 203 in herb. NICH.

A few stems with good sporophytes were collected by C.K. Wang. This species previously has been reported from Java, Celebes, Borneo and the Philippines, but not from Formosa.

XV. *Fissidens closteroides* Iwatsuki, a new species from the Philippines.

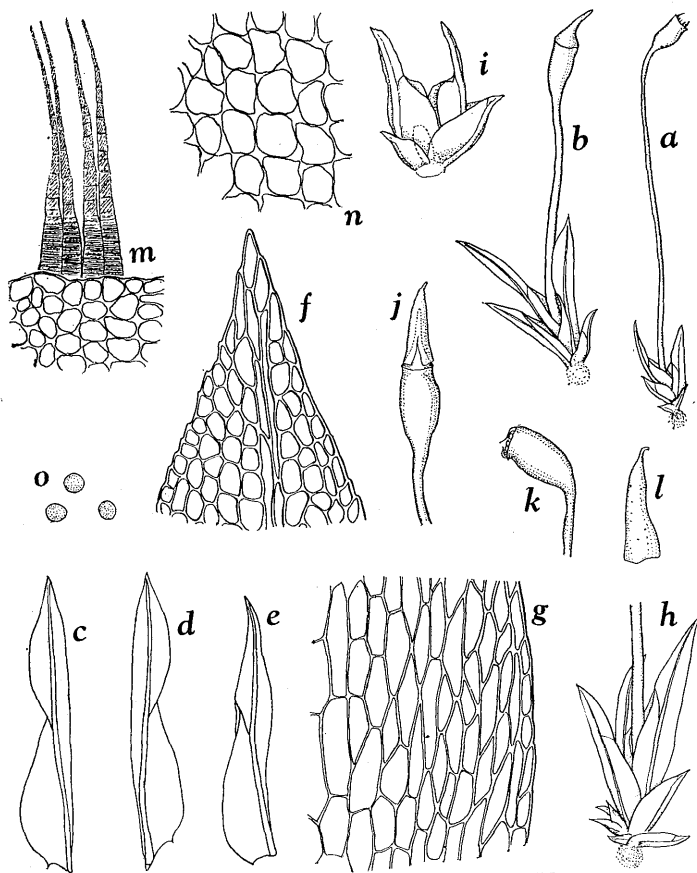


Fig. 2. *Fissidens closteroides* Iwatsuki. a. Plant, $\times 12$. b. Do., $\times 23$. c-e. Leaves, $\times 34$. f. Leaf-cells at apex, $\times 260$. g. Leaf-cells at vaginant lamina, $\times 260$. h. Plant with male inflorescence, $\times 27$. i. Perigonium, $\times 51$. j-k. Capsules, $\times 27$. l. Calyptra, $\times 34$. m. Peristome teeth, $\times 260$. n. Exothecial cells, $\times 260$. o. Spores, $\times 260$. All drawn from the type.

Fissidens closteroides Iwatsuki, sp. nov.²⁾ (Sect. Aloma).

Plants very minute, almost stemless, 0.1–0.15 mm high, simple or rarely divided. Leaves of 2–3 pairs, the lower ones small; the upper leaves lanceolate, acute at apex, 0.9–1.3 mm long, margin not bordered, faintly crenulate above; costa strong, reaching to the apex; vaginant lamina about 1/2 to 3/5 the length of the leaf; dorsal lamina narrower towards the base, usually not reaching the base; leaf cells smooth, cells of the median portion of the lamina irregular, short-rectangular to hexagonal, 15–25 μ long, 10–12 μ wide, cells along costa larger, 20–30 μ long, 10–12 μ wide, smaller at the margin; cells of vaginant lamina rectangular to hexagonal near costa, 20–40 \times 10–16 μ , smaller towards margin, hyaline and thin-walled. Monoicous; male buds attached to the base of stem, small with 2–4 minute bracts up to 0.25 mm long. Sporophytes terminal; setae relatively stout, variable in length, 2–4 mm long, straw-colored, smooth; capsule oblong-ovoid, erect to weakly inclined, slightly asymmetric, the urn about 0.3–0.4 mm long; exothecial cells quadrate, strongly collenchymatous, 15–20 \times 15–20 μ at middle portion; operculum conic-rostrate, 0.3–0.4 mm long; annulus lacking; calyptra cucullate, ca. 0.5 mm long, covering the beak only, indistinctly papillose above; peristome reddish brown, single, reflexed when dry, strongly inrolled when moist, teeth 16, ca. 150 μ long, divided into 2 slender forks, spirally thickened above; spores 8–12 μ in diam., finely papillose.

Hab. On moist decomposing rocks, Dumaguete City, Negros I., the Philippines. Jan. 3, 1961, coll. L.M. Verom.

The present species, closely related to *F. closteri* Aust., is one of the smallest species of *Fissidens*, which may cause it to be overlooked by collectors. *F. closteroides* has larger leaves (0.9–1.3 mm long in the upper leaves), larger leaf cells (20–30 μ in length along costa), with the costa reaching the apex, while *F. closteri* Aust. has smaller leaves (0.4–1.0 mm long), smaller leaf cells (10–20 μ long), with the costa ending below the apex.

I am much indebted to Dr. C. K. Wang, Tunghai University, China and Mrs. N. V. del Rosario of the University of the Philippines for their help in

2) Plantae minutae; caulis 0.10–0.15 mm altus; folia 2–3 juga, infima minuta, superne majora, 0.9–1.3 mm longa lanceolata, marginibus elimbatis, apice acuto, lamina vera ad 1/2–3/5 folii producta, costa valida, ad apicem producta; seta terminalis, 2–4 mm longa; theca erecta vel paulo inclinata, annulo nulo; operculum longe rostratum; sporae 8–12 μ magnae, minutissime papillosae.

forwarding the specimens to me, and to Dr. A. J. Sharp of the University of Tennessee for his editorial suggestions.

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XIV. 台湾の東海大学王忠魁博士の採品中に見出した 3 種の蘚について報告した。

1. *Glyphomitrium formosanum* Iwatsuki (新種)。本属としては大形で、葉が狭長であること、子のうが雌苞葉から高く超出すること、子のう壁の細胞の形などから他種と区別される。従来台湾からは *G. calycinum* (Mitt.) Card. が報告されていた。

2. *Stereophyllum ligulatum* (C. Müll.) Jaeg. インドから記載された本種が台湾からも見出された。安南から記載された *S. pygmaeum* Par. et Broth. のタイプ標本はやはり鈍頭の葉を持ち本種と同種である。

3. *Actinodontium raphidostegum* (C. Müll.) v. d. B. et Lac. 従来ジャバ、セレベス、ボルネオ、フィリッピンから知られていたが、今回台湾からも見出された。

XV. ホウオゴケ属にはツクシホウオウゴケやユウレイホウオウゴケの様に、非常に微小で採集者の目にもめったに触れぬ仲間がある。フィリッピン大学のロザリオ夫人から送られて来た標本中に、ツクシホウオウゴケに似て葉が長く、中肋が葉頂に達し、葉細胞も大きい種を見出し、*F. closteroides* Iwatsuki と名づけた。

○チャランの語源 (前川文夫) Fumio MAEKAWA: Ethymology for *Chloranthus spicatus*

チャランの語源は牧野図鑑旧版のときから葉が茶の葉に似ているからだとなる。成程似ているがなゼランというかが説明されていない。もう 3 年半も前の某日、亘理俊次博士と雑談中この植物に及んだ時、同博士の述べた解釈はいかにとも思われたので御紹介する。漢名珍珠蘭というように一見、白い球のようにみえる花を茶の香気つけに使う。蘭は芳香ある植物の総称である。このことを本草学者は心得ていて、チャランとよんだにちがいないと。

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□ Löve, Å. & D. Löve (ed.) **North atlantic biota and their history.** Pergamon Press, Oxford, etc. pp. 430 (1963) 1962 年 7 月にアイスランド大学で行われた題名のようなシンポジアムの記録である。主として北大西洋をまたいでの動植物の分布を 26 人の専門家が論議したもので主に第三紀以降現在までの地質、気候、海底地形、周極分布の諸型 (Hulten)、動物による陸地の接続問題、移動の示標としての種分化 (Nannfeldt)、北大西洋を終る分布移動 (Dahl)、分布能力と生き残りの問題 (Löve など)、種の古さ (Hadač)、氷期と生き残り (Cernohorsky, Nordhagen, Gjaerevoll, Hoppe)、氷期花粉 (Einarsson, Erdtman)、間氷期の高等植物の化石 (Thorarinsson) を扱っており、地質はスカンジナビア、スピッツベルゲン、ファロー諸島、グリーンランド、アイスランドを中心としているし、登場する動植物も寒帯性の種題である点で種分化を比較的近い地質年代で、しかもファイターをなるべく消却して知ることができる一方、甚だ制約された議論におちるのはやむをえない。たゞ一人 Omodeo, P. が貧毛類を使って南半球全般をカバーする分布論を展開しているのが異色である。

(前川文夫)